AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the claims

Claim 1 (original): A modulator comprising:

an odd-phase sample and hold circuit having its output terminal coupled to a first node;

an even-phase resonator coupled to both the first node and a second node;

a quantizer having its input terminal coupled to the second node, the quantizer having an output terminal;

a digital to analog converter having its input terminal coupled to the quantizer output terminal, the digital to analog converter having an output terminal coupled to the first node,

a first feed forward stage coupled between the first node and the second node; and

a second feed forward stage coupled between the resonator and the second node.

Claim 2 (original): The modulator of Claim 1, wherein the sample and hold circuit is a single phase sample and hold circuit.

Claim 3 (original): The modulator of Claim 1, wherein the sample and hold circuit is a three phase sample and hold circuit.

Claim 4 (original): The modulator of Claim 1, wherein the resonator is a switched capacitor resonator.

Claim 5 (original): The modulator of Claim 4, wherein the switched capacitor resonator comprises two sets of feedback capacitors.

Claim 6 (original): The modulator of Claim 5, wherein the switched capacitor resonator is adapted to receive at least four clock signals.

Claim 7 (original): The modulator of Claim 4, wherein the switched capacitor resonator is configured for capacitor switching.

Claim 8 (original): The modulator of Claim 4, wherein the switched capacitor resonator is configured for capacitor flipping.

Claim 9 (original): The modulator of Claim 1, in combination with a digital filter coupled to the quantizer output terminal.

Claim 10 (original): The modulator of Claim 1, in combination with at least one additional modulator having its input terminal coupled to the resonator.

Claim 11 (original): The modulator of Claim 1, wherein the quantizier is coupled directly to the second node.

Claim 12 (original): The modulator of Claim 1, wherein the resonator is a two phase resonator.

Claim 13 (original): The modulator of Claim 1, wherein the resonator is at least a four phase resonator.

Claim 14 (original): The modulator of Claim 1, wherein the first feed forward stage provides a gain of about one, and the second feed forward stage provides a gain of about 2.

Claim 15 (original): The modulator of Claim 1, wherein the second feed forward stage is coupled to the resonator between a first and a second stage of the resonator.

Claim 16 (currently amended): The modulator of Claim 1, wherein the resonator is a ~~2 N order~~ 2N order resonator, N being an integer.

Claim 17 (original): A method of modulating an analog signal, comprising the acts of:

sampling and holding the analog signal using an odd number of phases;

applying the sampled and held signal to an even-phase resonator;

quantizing a sum of the sampled and held signal, an output signal of the resonator, and a signal from the resonator thereby to provide a digital output signal; and

applying the digital output signal to the resonator.

Claim 18 (original): The method of Claim 17, wherein the sampling and holding uses one phase.

Claim 19 (original): The method of Claim 17, wherein the sampling and holding uses three phases.

Claim 20 (original): The method of Claim 17, wherein the resonator is a two phase resonator.

Claim 21 (original): The method of Claim 17, wherein the resonator is at least a four phase resonator.

Claim 22 (original): The method of Claim 17, further comprising the act of applying at least four clock signals to the resonator.

Claim 23 (original): The method of Claim 17, further comprising the act of configuring the resonator for one of capacitor switching or capacitor flipping.

Claim 24 (original): The method of Claim 17, further comprising the act of applying predetermined gain to the sampled and held signal and to the signal from the resonator prior to the act of quantizing the sum.

Claim 25 (currently amended): The method of Claim 17, wherein the resonator is a ~~2 N order~~ 2N order resonator, N being an integer.